

What is claimed is:

1 1. An apparatus comprising a plurality of low pass filters coupled to a common
2 mode rejection amplifier to produce a band pass amplifier response.

1 2. The apparatus of claim 1 wherein the plurality of low pass filters includes a
2 first low pass filter having a first corner frequency, and a second low pass filter
3 having a second corner frequency, and wherein the band pass amplifier response is
4 substantially between the first corner frequency and the second corner frequency.

1 3. The apparatus of claim 1 wherein at least one of the plurality of low pass
2 filters comprises a programmable low pass filter.

1 4. The apparatus of claim 3 wherein the common mode rejection amplifier
2 comprises a differential amplifier.

1 5. The apparatus of claim 4 wherein the differential amplifier includes two
2 parallel-coupled differential input stages coupled to the plurality of low pass filters.

1 6. The apparatus of claim 1 further comprising an input stage having first and
2 second differential outputs, wherein the plurality of low pass filters comprises first
3 and second low pass filters coupled to the first differential output, and third and
4 fourth low pass filters coupled to the second differential output.

1 7. The apparatus of claim 6 wherein:
2 the first and third low pass filters have substantially the same corner
3 frequency; and
4 the second and fourth low pass filters have substantially the same corner
5 frequency.

1 8. An apparatus comprising:
2 first and second differential input nodes;
3 first and second low pass filters coupled to the first differential input node;
4 third and fourth low pass filters coupled to the second differential input
5 node; and
6 a differential amplifier with two parallel input stages coupled to the first,
7 second, third, and fourth low pass filters.

1 9. The apparatus of claim 8 wherein at least one of the first, second, third, and
2 fourth low pass filters has a programmable response.

1 10. The apparatus of claim 8 further comprising an automatic gain control
2 circuit having a transistor to shunt a pair of differential output nodes from the
3 differential amplifier.

1 11. The apparatus of claim 10 wherein the automatic gain control is coupled to
2 sense a voltage on the first and second differential input nodes.

1 12. The apparatus of claim 10 wherein the automatic gain control is coupled to
2 sense a voltage on the differential output nodes of the differential amplifier.

1 13. The apparatus of claim 8 further comprising an input amplifier coupled to
2 receive an input signal and to drive the first and second differential input nodes.

1 14. The apparatus of claim 13 wherein the first and third low pass filters exhibit
2 a corner frequency corresponding to a first corner frequency of a band pass
3 response, and the second and fourth low pass filters exhibit a corner frequency
4 corresponding to a second corner frequency of the band pass response.

1 15. An apparatus comprising:

2 a first amplifier;
3 a second amplifier having common mode rejection; and
4 a plurality of low pass filters coupled between the first and second amplifiers
5 to set a band pass response by presenting unwanted frequency components in
6 common mode to the second amplifier.

1 16. The apparatus of claim 15 wherein the plurality of low pass filters
2 comprises:

3 first and second low pass filters coupled to a first differential output node of
4 the first amplifier; and
5 third and fourth low pass filters coupled to a second differential output node
6 of the first amplifier.

1 17. The apparatus of claim 16 wherein the second amplifier comprises:
2 a first differential input stage coupled to the first and third low pass filters;
3 and
4 a second differential input stage in parallel with the first differential input
5 stage, the second differential input stage coupled to the second and fourth low pass
6 filters.

1 18. The apparatus of claim 17 wherein:
2 the first and third low pass filters exhibit a corner frequency corresponding
3 to a first corner frequency of the band pass response; and
4 the second and fourth low pass filters exhibit a corner frequency
5 corresponding to a second corner frequency of the band pass response.

1 19. The apparatus of claim 18 wherein the first, second, third, and fourth low
2 pass filters are programmable.

1 20. An electronic system comprising:

2 an omni-directional antenna; and
3 a sliding band pass amplifier having an input coupled to the omni-directional
4 antenna, the sliding band pass amplifier including a plurality of low pass filters and
5 a differential amplifier coupled together to produce a band pass response having
6 corner frequencies related to corner frequencies of the plurality of low pass filters.

1 21. The electronic system of claim 20 wherein at least one of the plurality of low
2 pass filters is programmable.

1 22. The electronic system of claim 21 further comprising a processor to
2 influence operation of the at least one programmable low pass filter.

3

4 23. The electronic system of claim 21 further comprising:
5 a mixer coupled to an output of the sliding band pass amplifier; and
6 a local oscillator to drive the mixer.

1 24. The electronic system of claim 23 further comprising a processor to
2 influence operation of the local oscillator and the at least one programmable low
3 pass filter.

1 25. The electronic system of claim 20 wherein the differential amplifier
2 comprises two parallel differential input stages.

1 26. A method comprising:
2 setting a local oscillator; and
3 setting corner frequencies of low pass filters coupled to a differential
4 amplifier to set a band pass response of the differential amplifier.

1 27. The method of claim 26 wherein setting corner frequencies sets frequencies
2 to be rejected in a common mode of the differential amplifier.

1 28. The method of claim 26 wherein setting corner frequencies sets frequencies
2 to be amplified in a differential mode of the differential amplifier.